

Atty Docket No. 004070 USA/PDC/WF/OR  
**PATENT APPLICATION**

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Application No. 09/855,253

### REMARKS

Claims 1-19 are all the claims pending in the application. Claims 1, 12-16, and 18 are rejected under 35 U.S.C. § 102(b) as being anticipated by Maeda et. al, USP 5,572,323 ("Maeda"). Claim 11 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Maeda. Claims 2-10, 17, and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims. The drawings are objected to for failing to comply with 37 CFR 1.84(p)(4) and 37 CFR 1.84(p)(5). Further, the Examiner states the title of the invention is not descriptive and requires a new title.

### Drawings

The Examiner objects to the drawings and requires Applicant to furnish corrected drawings. Corrected drawings for Figs. 1 and 2 are submitted as an Appendix to this Amendment. These corrections changed the reference "18" in Fig. 1 to "1B," and replaced plate 35 in Fig 2 with a new plate 35 having slots 35a, 35b, and 35c. Further, reference "IM<sub>4</sub>" in Fig. 2 has been changed to "IM<sub>1</sub>." See, Application, page 19, lines 5-10. The corrected figures use numbering consistent with the description in the specification, and so add no new matter. Applicant asserts these corrections are responsive to the Examiner's objections.

### Title

The title has been changed to "DYNAMIC AUTOMATIC FOCUSING METHOD AND APPARATUS." The invention is directed to providing a method and apparatus for automatically

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focusing a light beam on an article being processed, and maintaining the focus while the article is being processed. Applicants believe the revised title is descriptive of the invention and respectfully request reconsideration and withdrawal of the objection.

**35 U.S.C. § 102(b)**

The Examiner has rejected claims 1, 12-16, and 18 as being anticipated by Maeda.

Applicants respectfully traverse the rejection.

Maeda is directed to an apparatus for focusing a light beam by effecting infinitesimal displacement. Maeda generates an interference pattern using a double grating unit on which the incident light is the light reflected by a specimen. The double grating unit provides a single interference pattern from which defocusing may be detected. "Qualitatively, light intensity of the interference pattern is varied in accordance with the states of the defocusing, ..., the light intensity distributions of the interference pattern in cases where the defocusing  $d$  is negative ( $d$ ) and positive ( $d$ ) are inverted to each other. The variation of the light intensity distribution of the interference pattern is detected by the photo-detector 15, so that the defocusing  $d$  is detected." See, col. 10, lines 28-35, *emphasis added*. Maeda teaches only one interference pattern.

Independent claims 1 (apparatus), 15 (system), 16 (method), and 18 (method) require at least two interference patterns. When the system is not in focus, one interference pattern is displaced from the other, and this displacement is measured to provide a focusing adjustment signal. See, Application, page 20, lines 10-21, and Figs. 5a and 5b.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." MPEP 2131 citing

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*Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Here, Maeda teaches only a single interference pattern, and not at least two interference patterns as recited in the independent claims. For at least this reason, Applicant asserts independent claims 1, 15, 16 and 18 are patentable as well as all claims dependent therefrom, and respectfully requests reconsideration and allowance.

**35 U.S.C. § 103(a)**

The Examiner has rejected claim 11 as being unpatentable over Maeda stating that it would have been obvious to provide a display for the first and second images. However, as argued *supra*, Maeda does not teach or reasonably suggest providing two images, as recited in claim 11, one of each interference pattern.

To establish a *prima facie* case of obviousness, the prior art reference must teach all the claim limitations. MPEP 2142. Here Maeda teaches a single image of an interference pattern, but does not teach or reasonably suggest a first and second image as recited in claim 11. Therefore, Maeda fails to teach all the limitations of claims 11 and the *prima facie* case for obviousness must fail. For at least this additional reason, Applicant asserts claim 11 is patentable and request reconsideration and allowance.

**CONCLUSION**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the

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Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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Date: March 26, 2003

## CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this AMENDMENT UNDER 37 C.F.R. § 1.111 is being facsimile transmitted to the U.S. Patent and Trademark Office this 26<sup>th</sup> day of March, 2003.

*Thea K. Wagner*  
Thea K. Wagner

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